SECTION 8 - TRAFFIC CONTROL

8.1 Objectives, Applicability

8.1.1 The provisions of this section are intended to achieve the following purposes:

8.1.1.a. to permit vehicular traffic on Grafton streets to move in an efficient manner without excessive delay or congestion,

8.1.1.b. to permit emergency vehicles to reach homes and businesses with a minimum of delay,

8.1.1.c. to reduce motor vehicle and pedestrian accidents on town's streets,

8.1.1.d. to consider and allow for safe and convenient routes for pedestrians and bicyclists,

8.1.1.e. to promote cleaner air and to reduce automotive exhaust emissions caused by vehicles standing and idling for an excessive time,

8.1.1.f. to promote the efficient use of the town's arterial and collector streets so that use of local and neighborhood streets as shortcuts can be discouraged,

8.1.1.g. to avoid excessive traffic demand on town streets that necessitate extraordinary town expenditures to maintain adequate and safe traffic flow,

8.1.1.h. to maintain a balance between the traffic generating capacity of dwellings and businesses in the town and the traffic carrying capacity of streets and intersections,

8.1.1.i. to encourage alternate methods of transporting people, through public transportation, carpools and vanpools, bicycling and walking, rather than near exclusive reliance on single occupant automobiles,

8.1.1.j. to encourage the use of good traffic engineering principles and design standards consistent with a predominantly residential suburban town,

8.1.1.k. to encourage the positive management of traffic flow consistent with the town's other stated objectives,

8.1.1.l. to encourage private sector participation in dealing with the town's traffic problems,

8.1.1.m. to expand the town's inventory of data about traffic conditions on town streets,

8.1.1.n. to promote the concentration of traffic on major streets by increasing the capacity of these facilities,

8.1.1.o. to promote efficient level of operating speeds on major streets and arterials, and

8.1.1.p. to create an adequate supply of off-street parking to preserve street space for carrying traffic rather than parking cars.

8.1.2 No building permit shall be granted for the erection of a new building or the enlargement of an existing building with the result that:

8.1.2.a. there are 10,000 square feet or more of gross floor area on the lot, including any existing floor area, but not including any floor area devoted to residential use or to off-street parking, or

8.1.2.b. there are 50 or more dwelling units, or their equivalent, in a development, including any existing dwelling units, unless a special permit with site plan review has been granted and the SPGA has made a determination that the streets and intersections affected by the proposed development have, or will have as a result of traffic improvements, adequate capacity, as set forth in subsection 8.3, to accommodate the increased traffic from the development.

8.2 Traffic Study Required

8.2.1 A traffic study shall be submitted with each application for a subdivision of greater than 20 units, special permit or special permit with site plan review, or where required by the Planning Board, unless otherwise waived by a four-fifths (4/5) vote of the SPGA.

8.2.2 The traffic study shall be conducted by a traffic engineer who will certify that he/she qualified for the position of member of the Institute of Traffic Engineers.

8.2.3 For the purposes of this analysis, the terms below shall have the meaning indicated. The morning and evening "peak period" shall usually be the two hours between 7 A.M. and 9 A.M. and between 4 P.M. and 6 P.M. respectively. The morning and evening peak hour shall be that consecutive 60 minute segment within the "peak period" in which the highest traffic count occurs as determined by traffic counts of the peak period divided into 15-minute segments. For uses which have an exceptional hourly, daily, or seasonal peak period, the Planning Board may require that the analysis be conducted for that extraordinary peak period.

A street or intersection "likely to be affected by the development" is one which has an Average Daily Traffic (ADT) of 2,000 vehicles or more and either: 1) carries 10 percent or more of the estimated trips generated by the development or 2) in the case of an intersection, traffic from the proposed development will add 5 percent or more to the approach volumes.

8.2.4 The traffic study shall include:

8.2.4.a. An estimate of trip generation for the proposed development showing the projected inbound and outbound vehicle trips for the morning and evening peak periods and a typical one hour not in the peak period. Where there is existing development of the same type of use on the site, actual counts of trip generation shall be substituted. Trip generation rates may be based on: 1) the "Trip Generation Manual, Third Edition" (or more recent editions as they become available) prepared by the Institute of Transportation Engineers, and, if applicable, 2) data about similar developments in Massachusetts or 3) data from professional

planning or transportation publications, provided the methodology and relevance of the data from 2) and 3) is documented.

8.2.4.b. An estimate of the directional distribution of new trips by approach streets and an explanation of the basis of that estimate. Where there is existing development of the same type of use on the site, actual counts of trip directional distribution shall be submitted.

8.2.4.c. An assignment of the new trips to be generated by the proposed development to the segments of the Town street network, which shall include state highways in Grafton, which are likely to be affected by the proposed development (see 8.2.3).

8.2.4.d. Average Daily Traffic (ADT) on the streets likely to be affected by the development (see 8.2.3), counted for a 24 hour period.

8.2.4.e. Intersection turning movement counts of the morning and evening peak periods at the intersections likely to be affected by the proposed development (see 8.2.3). In special circumstances where the peak traffic impacts are likely to occur at times other than the usual morning and evening peak periods, the Planning Board may require counts for those other peak periods.

8.2.4.f. An inventory of the roadway characteristics of the principal approach streets adjacent to the development site and of the streets in the intersections at which turning movement counts are taken showing the width of the right of way and of the traveled way, traffic control devices, obstructions to adequate sight distance, the location of driveways or access drives within 500 feet of the entrance to the site for uses that are substantial trip generators, and the presence or absence of sidewalks and their condition.

8.2.4.g. In the case of a development in an abutting city or town, which will have a traffic impact on a street or intersection in Grafton which is likely to be affected by the proposed development for which the traffic study is being prepared, the traffic impact of the development in the abutting city or town shall be included in the traffic study provided: 1) that traffic impact is equal to or greater than that set forth in the test in 8.2.3., 2) the development has been approved by official action of that abutting city or town but has not opened for use prior to the date that the traffic counts required by this section were taken, and 3) data on the traffic impact of that development, comparable to that required by this section, is available.

8.2.4.h. An analysis of the effect on the capacity of those intersections in Grafton street system likely to be affected by the development (see 8.2.3) during peak periods of: 1) the additional traffic generated by the development, and 2) additional traffic from other developments previously approved by the Town of Grafton for which a traffic study was required, or by an abutting city or town as provided in subparagraph "g" above, which have not yet been opened for use prior to the date that the traffic counts required by this section were taken. Analysis of the capacity of intersections shall be based on traffic "levels of service" as described in the "Highway Capacity Manual, 1985 Edition" published by the Transportation Research Board. This analysis may include an intersection of an access drive serving a development and a segment of the Grafton street system.

8.2.4.i. Where mitigating measures or trip reduction programs are proposed, they shall be included in the traffic study at the time of filing of the application. Where the proposed mitigating measure is the construction of a traffic engineering improvement, evidence, such as letters of support, or commitment, or approval, or the award of a contract, may be submitted to show that construction of the traffic improvement is likely to occur.

8.2.4.j An estimate of the time and amount of peak accumulation of off-street parking.

8.2.4.k. Estimates of the "level of service, of affected intersections in five years from the date of application without the development built and with it built.

The counts referred to above shall have been taken within the 12 months prior to the filing of the application, unless otherwise waived by the SPGA. Upon request, the traffic engineer shall furnish an explanation of the methodology of the traffic study and additional data, as needed.

8.3 Adequate Traffic Capacity

8.3.1 Prior to granting a special permit or special permit with site plan review in those cases covered by subparagraph 8.1.2 or as may be required elsewhere in this By-Law, the SPGA shall determine that the streets and intersections likely to be affected by the proposed development currently have, or will have as a result of traffic improvements, adequate capacity, as defined in subparagraph 8.3.2. In making its determination of adequate capacity, the SPGA shall consider at least the cumulative effect on a street or intersection likely to be affected by the development, as provided in subparagraph 8.2.3, or: 1) existing traffic conditions, 2) estimates of traffic from other proposed developments which have already been approved in part or in whole by the Town of Grafton for which a traffic study was required or by official action of an abutting city or town, which have not yet been opened for use prior to the date that the traffic counts required by this section were taken, and 3) estimates of traffic from the proposed development.

8.3.2 Adequate Capacity Defined by Level of Service

Adequate capacity shall mean level of service "D" or better as described in the "Highway Capacity Manual, 1985 or later Editions" published by the Transportation Research Board. If the level of service that would result from the cumulative effect, referred to in subparagraph 8.3.1 is "E" or below, the SPGA shall determine there is not adequate capacity and shall deny the application.

8.3.3 Mitigating Measures to Improve Capacity

The SPGA shall consider that various traffic engineering improvements can improve the traffic carrying capacity of an intersection or street and improve the level of service rating to a higher and acceptable value. The SPGA shall consider such improvements in its determination and may make a conditional determination that adequate capacity is dependent upon the construction of the traffic engineering improvement.

The SPGA may make a condition of its approval of the special permit or special permit with site plan review that the start, or any stage, of the construction of the development, or the occupancy thereof, is dependent upon the start or completion of the traffic engineering improvement. A conditional approval shall be dependent upon at least a start of the physical construction of the traffic engineering improvement. Letters of support, or commitment, or approval, or the award of a contract are not considered as a start of construction. Prior to making a conditional determination of adequacy, the SPGA may consider as evidence such letters of support, or commitment, or approval, or the award of a contract that construction of the traffic improvement is likely to occur as the basis for making a conditional determination of adequacy.

8.3.4 Trip Reduction Requirements

As a condition of its approval of a special permit or a special permit with site plan review, the SPGA may require actions and programs by the owner and/or manager of a development to reduce the number of single occupant automobile trips made to a development, particularly during peak traffic hours. Such actions and programs may include:

8.3.4.a. providing a pass to employees for use on a public transportation system that serves the development site,

8.3.4.b. use of carpools and vanpools

8.3.4.c. scheduling of hours of operation, such as flextime, staggered work hours, and spread scheduling that reduces trips during peak traffic hours,

8.3.4.d. preferential parking locations and arrangements for vehicles other than single occupant automobiles,

8.3.4.e. restrictions on access to, or egress from, off-street parking areas during peak traffic hours, or

8.3.4.f. bicycle parking facilities, and other measures such as locker and shower facilities to encourage bicycle commuting.

Where such conditions are included, they shall include a reporting system which monitors the effectiveness of the trip reduction program. The SPGA may make a condition of the granting of the special permit or special permit with site plan review that: 1) such monitor be directly responsible to and report to the Inspector of Buildings and 2) the applicant be responsible for the cost of providing such monitoring system.

If the Inspector of Buildings determines that the conditions of the special permit or special permit with site plan review are not being met, he/she shall order the applicant to bring the development into compliance or shall take such other corrective enforcement action as may be needed to insure compliance.

(T.M. 5-10-89)

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